Science Toolkit: Grade 8 Objective 1.C.1.b

Student Handout: Science: Grade 8 Objective 1.C.1.b

Standard 1.0 Skills and Processes

Topic C. Communicating Scientific Information

Indicator 1. Develop explanations that explicitly link data from investigations conducted, selected readings and, when appropriate, contributions from historical discoveries.
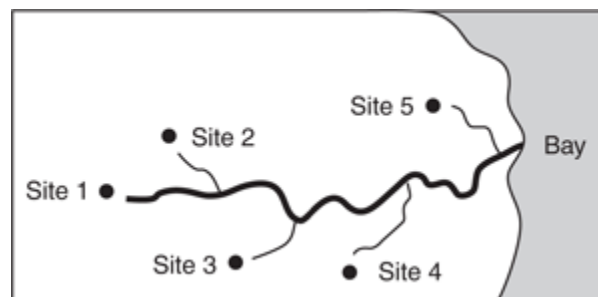
Objective b. Interpret tables and graphs produced by others and describe in words the relationships they show.

Selected Response (SR) Item

Question

Use the information below to answer the following.

Students studied the water quality at five different sites in a water drainage area. The water from the five streams and river sites empties into a bay. The students recorded data for dissolved oxygen, percentage of floating sediments, water quality for aquatic life, temperature, and salinity. The information is shown in the data table below.

WATER QUALITY AT FIVE SAMPLE SITES

Site	Dissolved Oxygen (milligrams per liter)	Percentage of Floating Sediments (%)	Water Quality for Aquatic Life	Temperature (°C)	Salinity (parts per thousand)
1	7.0	5	Good	11.0	0.1
2	6.3	15	Good	13.0	0.5
3	4.7	20	Moderate	19.0	7.0
4	3.1	70	Poor	26.6	14.0
5	3.7	15	Moderate	24.0	15.0

The data table below shows information collected from four water samples.

Water Sample	Percentage of Nitrogen (%)	Algae Growth After 30 Days (grams)	Dissolved Oxygen

			(milligrams per liter)
Control sample	0	2.2	7.0
X	10	10.5	6.2
Y	15	12.3	4.5
Z	18	16.5	3.2

Which of the following relationships is reflected by the data above?

   A. When nitrogen increases, algae growth increases.
   B. When nitrogen decreases, algae growth increases.
   C. When nitrogen increases, dissolved oxygen increases.
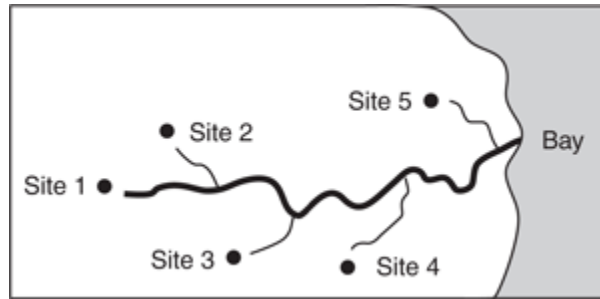   D. When nitrogen decreases, dissolved oxygen decreases.

Correct Answer

A. When nitrogen increases, algae growth increases.

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